

Application No. 10/571,140  
Amendment dated March 2, 2009  
Reply to Office Action of May 13, 2008

Docket No.: 0038-0491PUS1

AMENDMENTS TO THE CLAIMS

1-6. (Canceled).

7. (Currently Amended) A method of driving an electromagnetic pump, the method comprising:

conveying a fluid from a pump chamber formed inside a cylinder by housing a plunger including a permanent magnet inside the cylinder;

passing a current through an aircore electromagnetic coil fitted around the cylinder, and  
switching a direction of the current, to reciprocally move the plunger in the axial direction inside the cylinder; and

~~applying a pulse voltage or~~ flowing a pulse current including a period where a voltage or current value is zero when ~~the polarity of a driving voltage or~~ a supplied current of the electromagnetic coil is inverted,

~~wherein the pulse voltage or the pulse current flows so that a minute voltage pulse of current at least 30% of a maximum voltage is applied or a minute current pulse at least 30% of a maximum current flows before the period~~ an inverted maximum current flows for a minute time period before the period where the ~~voltage or~~ current value is zero, when a polarity of the applied current of the electromagnetic coil is inverted.

8. (Canceled)

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9. (Currently Amended) A method of driving an electromagnetic pump, the method comprising:

conveying a fluid from a pump chamber formed inside a cylinder by housing a plunger including a permanent magnet inside the cylinder;

passing a current through an aircore electromagnetic coil fitted around the cylinder, while switching a direction of the current, to reciprocally move the plunger in the axial direction inside the cylinder; and

~~applying a pulse voltage or flowing a pulse current so that~~ flowing an offset voltage current of no greater than 30% of ~~a inverted~~ maximum voltage is applied or an offset current of no greater than 30% of a maximum current flows current when the ~~a~~ polarity of ~~a driving voltage or a supplied current of the electromagnetic coil is inverted.~~

10. (Currently Amended) The method of driving an electromagnetic pump according to Claim 9, wherein ~~the pulse voltage is applied or the pulse current flows so that before a period where the offset voltage is applied or the offset current flows, a minute voltage pulse of at least 30% of the maximum voltage is applied or a minute current pulse of at least 30% of the maximum current flows~~ before a period where the offset current flows, a minute current pulse at least 30% of the maximum current flows.

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